SONY

Network Sharing Camera

For details on the advanced operations, please access ***"Network Sharing Camera Handbook"*** contained on the supplied CD-ROM via a computer.

Instruction Manual

Before operating the unit, please read this manual thoroughly, and retain it for future reference.

NSC-GC1/GC3

MEMORY STICK ™

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3-273-550-**12**(1)

Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. NSC-GC

Serial No. _____

WARNING

To reduce fire or shock hazard, do not expose the unit to rain or moisture.

Read this first

CAUTION

Risk of explosion if battery is replaced by an incorrect type.

Dispose of used batteries according to the instruction.

"Do not incinerate, (or) disassemble; may explode or release toxic materials. Do not short circuit; may cause burns."

For Customers in the U.S.A. and Canada

RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.

You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.

For more information regarding recycling of rechargeable batteries, call toll free 1-800-822-8837, or visit http://www.rbrc.org/

Caution: Do not handle damaged or leaking Lithium-Ion batteries.

For Customers in the U.S.A.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For Customers in Europe

Notice for the customers in the countries applying EU Directives

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables shorter than 3 meters (9.8 feet).

Attention

The electromagnetic fields at the specific frequencies may influence the picture and sound of this unit.

Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the communication cable (USB, etc.) again.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Notice for customers in the United Kingdom

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS 1362, (i.e., marked with an ASTA or BSI mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

Notes on using your camera

Internal memory and “Memory Stick Duo” back up

Do not turn off the camera or remove “Memory Stick Duo” while the access lamp is lighted, as the internal memory data or “Memory Stick Duo” data may be destroyed. Always protect your data by making a back up copy.

Notes on recording/playback

- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- This camera is neither dust-proof, nor splash-proof, nor water-proof. Read “Precautions” (page 29) before operating the camera.
- Be careful not to get the camera wet. Water entering the inside of the camera may cause malfunctions which in some cases may not be repairable.

- Do not aim the camera at the sun or other bright light. It may cause the malfunction of your camera.
- Do not use the camera near a location that generates strong radio waves or emits radiation. The camera may not be able to record or play back properly.
- Using the camera in sandy or dusty locations may cause malfunctions.
- If moisture condensation occurs, remove it before using the camera (page 29).
- Do not shake or strike the camera. In addition to malfunctions and an inability to record images, this may render the recording medium unusable, or cause image data breakdown, damage or loss.
- Clean the flash surface before use. The heat of flash emission may cause dirt on the flash surface to become discolored or to stick to the flash surface, resulting in insufficient light emission.
- When connecting your camera to another device with a cable, be sure to insert the connector plug in the correct way. Pushing the plug forcibly into the terminal will damage the terminal and may result in a malfunction of your camera.
- Movies other than those shot, edited or composed on this camera cannot be played back.

Notes on the LCD screen and lens

- The LCD screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, there may be some tiny black points and/or bright points (white, red, blue or green in color) that constantly appear on the LCD screen. These points are normal in the manufacturing process and do not affect the recording in any way.
- Do not hold the camera by only holding the LCD panel.

Note on disposal/transfer

When using software embedded in the camera, personal information such as IDs and mail addresses may be saved on the internal memory of the camera. When transferring the camera to others or on disposal, do so after deleting the information input.

About changing the language setting

The on-screen displays in each local language are used for illustrating the operating procedures. Change the screen language before using your camera if necessary (page 9).

About this manual

- The photographs used as examples of pictures in this Handbook are reproduced images, and are not actual images shot using this camera.
- Design and specifications of recording media and other accessories are subject to change without notice.
- The screenshots are from Windows XP. The scenes may vary depending on the operating system of the computer.

On image data compatibility

- This camera conforms with DCF (Design rule for Camera File system) universal standard established by JEITA (Japan Electronics and Information Technology Industries Association).
- Playback of images recorded with your camera on other equipment and playback of images recorded or edited with other equipment on your camera are not guaranteed.

Warning on copyright

Television programs, films, videotapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

No compensation for contents of the recording

The contents of the recording cannot be compensated for if recording or playback is not possible due to a malfunction of your camera or recording media, etc.

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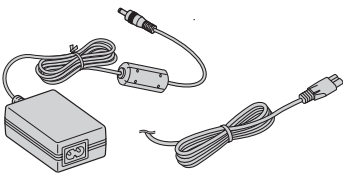
Getting started

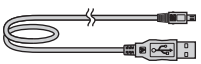
Checking the accessories supplied

- AC Adaptor UPA-AC05 (1)/ Power cord (mains lead) (1)

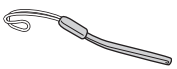


- A/V connecting cable (1)

- USB cable (1)

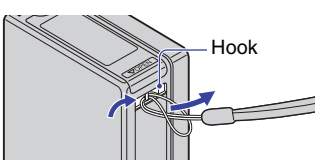


- Hand strap (1)

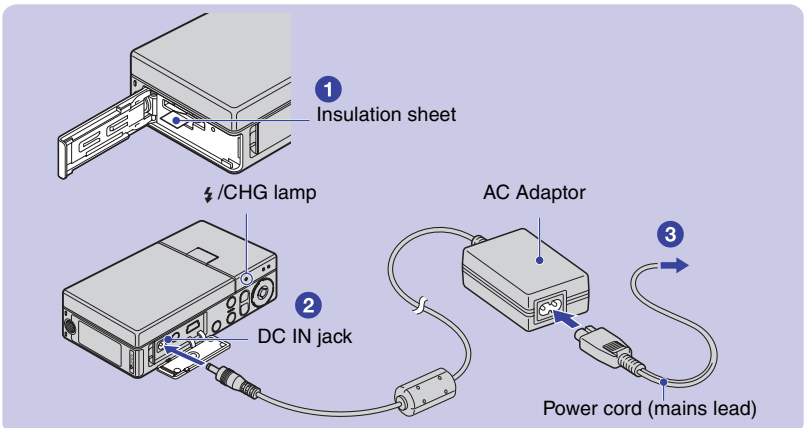


- CD-ROM “Net-Sharing CAM Application Software” (1) (page 16)
  - Picture Motion Browser (software)
  - Picture Motion Browser Guide
  - Network Sharing Camera Handbook (PDF)
- Instruction Manual (this manual) (1)

Attach the strap and place your hand through the loop to prevent the camera from damage by being dropped, etc.



1 Charging the built-in battery



• The battery is built in within the camera.

1 Remove the insulation sheet.

2 Connect the AC Adaptor to the DC IN jack of the camera, making sure the power is off.

3 Plug the power cord (mains lead) to a wall outlet (wall socket).

The /CHG lamp lights on, and charging starts.
When the /CHG lamp turns off, charging is finished (Practical charge).

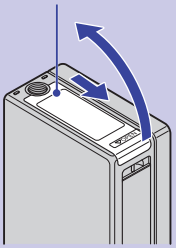
Charging time

Full charge time
Approx. 120 min.

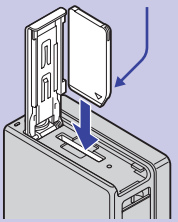
- Time required to charge a fully depleted battery at a temperature of 25°C (77°F). Charging may take longer under certain circumstances or conditions.
- See page 25 for the number of images that can be recorded.
- Connect the AC Adaptor to an easily accessible wall outlet (wall socket) close by.
- Even if the /CHG lamp is not lit, the AC Adaptor is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet (wall socket). If some trouble occurs while using the AC Adaptor, immediately shut off the power by disconnecting the plug from the wall outlet (wall socket).
- If you do not operate the camera for a long time, disconnect the AC Adaptor from the DC IN jack of the camera and from a wall outlet (wall socket).

2 Inserting a “Memory Stick Duo” (not supplied)

1 “Memory Stick Duo” cover



2 Insert the “Memory Stick Duo” all the way in as shown in the illustration until it clicks.



1 Open the “Memory Stick Duo” cover.

2 Insert the “Memory Stick Duo” (not supplied) all the way in until it clicks.

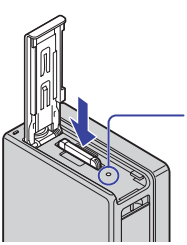
3 Close the “Memory Stick Duo” cover.

When there is no “Memory Stick Duo” inserted

The camera records/plays back images using the internal memory (approx. 8 MB).

To remove “Memory Stick Duo”

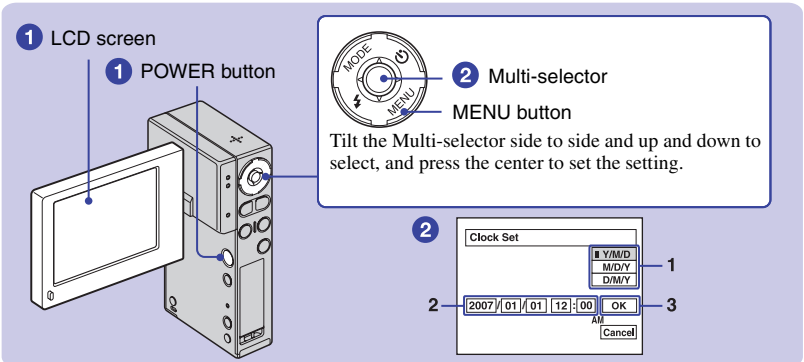
Open the “Memory Stick Duo” cover.



Make sure that **the access lamp** is not lit, then push the “Memory Stick Duo” in once.

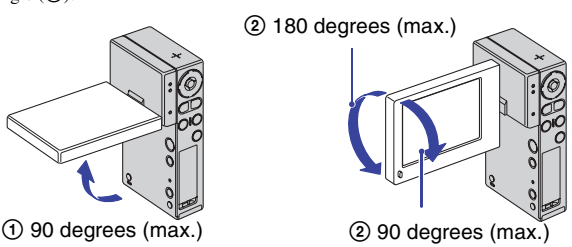
• Never remove “Memory Stick Duo” when the access lamp is lit. This may cause damage to data in the “Memory Stick Duo”.

3 Turning the camera on/setting the clock



1 Open the LCD panel to turn the power on.

Open and lift the LCD panel up to a 90 degrees angle from the camera (①), then rotate it to the desired angle (②).



You can also turn the power on by pressing POWER button.

2 Set the clock with the Multi-selector.

1 Select the date display format with ▲/▼.
2 Select each item with ◄/► and set the numeric value with ▲/▼.
3 Select [OK].

To turn the power off

Press POWER button.

To change the date and time

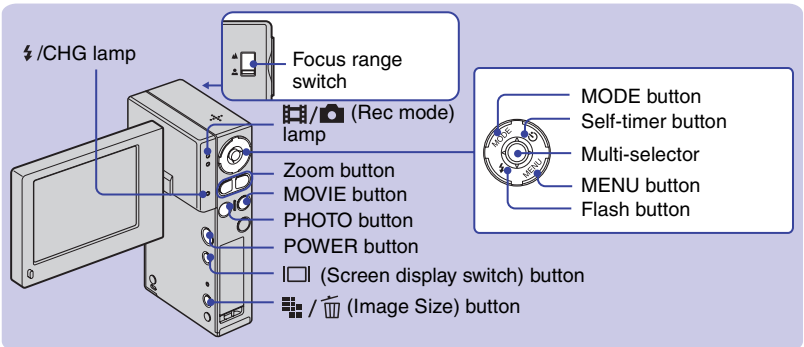
Press MENU, and select [Clock Set] in (Setup 2) (page 15).

To change the language

Press MENU, and select [Language] in (Setup 1) (page 15).

• You can turn off the operation beeps by selecting [Beep] in (Setup 1) (page 15).

Shooting images easily

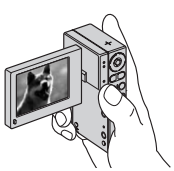


1 Open the LCD panel to turn the power on.

You can also turn the power on by pressing POWER.

2 Make sure the / (Rec mode) lamp lights up.

3 Confirm the composition.



Position the subject in the center of the screen.

4 Start shooting.

When shooting movies:

Press MOVIE.
To stop recording, press MOVIE again.

When shooting still images:

Press PHOTO.

Movies

Still images

- When shooting movies, the angle of view will change from when shooting still images.
- The shooting mode will automatically stop in either of the following situations.
  - – When the file size of the movie being recorded exceeds 2 GB.
  - – After the maximum shooting duration time* for each file has passed.

  * NSC-GC1: 2 hours, NSC-GC3: 29 minutes
- When shooting movies, the anti-blur function will be set on.

Useful functions for shooting

W/T Using the zoom

Press T to zoom, press W to undo zoom.

Close-up mode

Slide the Focus range switch to (Close-up) when shooting a subject close-up.

: Normal shooting (Approx. 1.0 m or farther (3 feet 3 3/8 inches or farther))

: Close-up shooting (Approx. 60 cm to 1.0 m (1 feet 11 5/8 inches to 3 feet 3 3/8 inches))

Flash (Selecting a flash mode for still images)

Press button repeatedly until the desired icon is displayed on the LCD screen.

(No indicator): Flash Auto

Strobes when there is insufficient light or backlight (default setting)

: Flash forced on

SL: Slow synchro (Flash forced on)

The shutter speed is slow in a dark place to clearly shoot the background that is out of flash light.

: Flash forced off

- While charging the flash, /CHG lamp lights on and is displayed.

Using the self-timer

Press (Self-timer) button.

(No indicator): Not using the self-timer

: Using the self-timer

If you press PHOTO, countdown timer is displayed, and after rapid beep sounds are heard, the camera will shoot.

Changing the screen display

Each time you press button, the display changes as follows.

Histogram on
↓
Indicators off
↓
Indicators on

Selecting the image size

Press / (Image size) button to select (Photo Size) or (Movie Size) with ◀/▶ on the Multi-selector, then select the desired image size with ▲/▼.

To turn off the Image Size menu, press the / button again.

(Movie Size):

640(30fps):

Shoot high quality movies in sizes suited for display on TV

320(30fps):

Shoot high quality movies in sizes suited for display on websites

320(15fps):

Shoot at a small size for e-mail attachment

(Photo Size):

5M:

For prints up to A4 (8×10")

3:2:

Shoot in 3:2 aspect ratio

3M:

For prints up to 10×15 cm (4×6") or 13×18 cm (5×7")

2M:

For prints up to 10×15 cm (4×6")

VGA:

Shoot at a small image size for e-mail attachment

Selecting a camera mode

Press MENU, then select the desired item in (Camera) mode (page 15).

Auto:

Allows easy shooting with the settings adjusted automatically.

Program:

Allows you to shoot with the exposure adjusted automatically (both the shutter speed and the aperture value). Also you can select various setting using the menu.

Scene Selection:

Allows you to shoot with the preset settings according to the scene.

Scene Selection

Twilight

Shoots night scenes without losing the nighttime atmosphere.

Twilight Portrait

Shoots sharp images of people in a dark place without losing the nighttime atmosphere.

Soft Snap

Shoots images with a softer atmosphere for portraits of people, flowers, etc.

Landscape

Shoots with the focus on a distant subject.

Hi-speed Shutter

Shoots moving subjects outdoors or in other bright places.

Beach

Shoots seaside or lakeside scenes with the blueness of the water captured more vividly.

Snow

Shoots snow scenes in white more clearly.

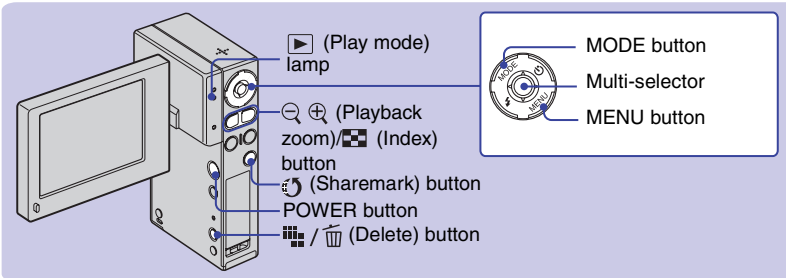
Fireworks

Shoots fireworks in all their splendor.

Candle

Shoots candlelit scenes, without spoiling the atmosphere.

Viewing/Editing images



1 Open the LCD panel to turn the power on.

You can also turn the power on by pressing POWER.

2 Press MODE to set the camera to playback mode.

(Play mode) lamp lights up.

3 Plays back movies or still images.

Movie:

Press the Multi-selector to playback a movie. (Press it again to stop playback.)
Press ▶ to fast forward, ◀ to rewind. (Press the Multi-selector to return to normal playback.)
Press ▼ to display the volume control screen, then adjust the volume with ▲/▼.

Still image:

Select an image with ◀/▶ on the Multi-selector.

To delete images

1 Press MODE to set the camera to playback mode.
2 Press / (Delete) while display in single-image mode or in index mode.
3 Select [Delete] with ▲ on the Multi-selector.

/To view an enlarged image (playback zoom)

Press while displaying a still image. To undo the zoom, press .
Adjust the position: ▲/▼/◀/▶
Cancel playback zoom: Press the Multi-selector.

Viewing an index screen

Press (Index) button to display the index screen while a still image is displayed.
Select an image with ▲/▼/◀/▶ on the Multi-selector.
To return to the single image screen, press the Multi-selector.
To display the next (previous) index screen, move the yellow frame up/down/left/right with ▲/▼/◀/▶.

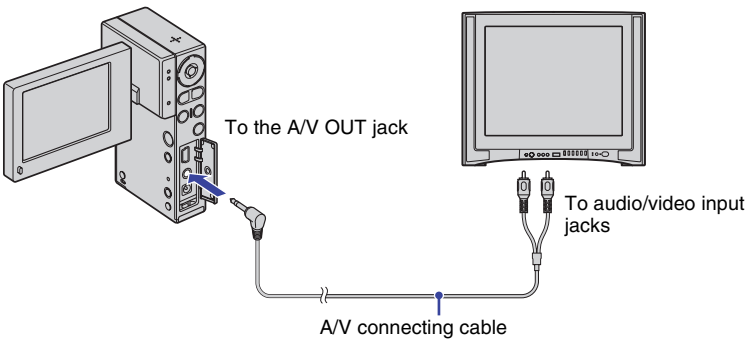
To delete images in index mode

1 While an index screen is displayed, press / (Delete) and select [Select] with ▲/▼ on the Multi-selector.
2 Select the images you want to delete with ▲/▼/◀/▶, then press the Multi-selector to display the (Delete) indicator on the selected image.
3 Press / (Delete).
4 Select [OK] with ▶.

• To delete all the images in the folder, select [All In This Folder] with ▲/▼ in step **1** instead of [Select].

To view images on TV screen

Connect the camera to the TV with the A/V connecting cable (supplied).



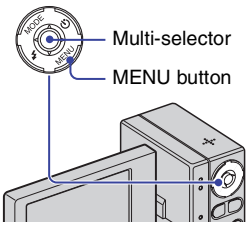
To select images to upload on a website (Sharemark)

1 Press MODE to set the camera to playback mode.
2 Select images to upload on a website and press (Sharemark) button.

To select images in Single Image mode, select [mark] with ▲/▼ on the Multi-selector.

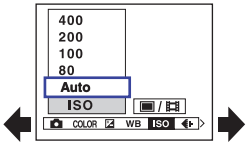
• To remove the Sharemark from an image, select the image to remove the Sharemark and take the same steps as when marking a Sharemark on an image.
• By using the software “PMB Portable” embedded in the camera, you can easily upload images marked with Sharemarks (page 16).

Changing the settings – Menu/Setup



1 Press MENU to display the menu.

2 Select the desired menu item with ◄/► on the Multi-selector.



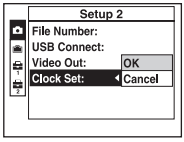
- In REC mode, / is indicated. You cannot set an item with / indicator in gray.
- In PLAY mode, press the Multi-selector after setting an item.

3 Select a setting with ▲/▼.

4 Press MENU to turn off the menu.

To select a Setup item

① Press MENU.
② Select (Setup) in step 2 and then press ► on the Multi-selector.
③ Select the item to set with ▲/▼/◄/►.



Menu items

The available menu items vary depending on the camera mode.
The shooting menu is available only in the shooting mode, and the viewing menu is available only in the playback mode.
For details on the menu items, see "Network Sharing Camera Handbook" (PDF).

Menu for shooting

Camera	REC Mode
Color Mode	Flash Level
EV	Saturation
White Bal	Sharpness
ISO	Setup
P.Quality	

Menu for viewing

(Folder)	(Resize)
(Protect)	(Rotate)
DPOF	(Divide)
(Print)	(Setup)
(Slide)	

Setup items

Camera

Function Guide	Auto Review
Red Eye Reduction	

Memory Stick Tool

Format	Change REC. Folder
Create REC. Folder	Copy

Internal Memory Tool

Format

Setup 1

LCD Backlight	Language
Beep	Initialize

Setup 2

File Number	Video Out
USB Connect	Clock Set

Enjoying your computer

Viewing "Network Sharing Camera Handbook" (PDF)

For advanced use of your camera, see "Network Sharing Camera Handbook" (PDF).
To view "Network Sharing Camera Handbook" (PDF), you need to install Adobe Reader on your computer.

For Windows users

1. Turn on the computer.
2. Place the CD-ROM (supplied) in the disc drive of your computer.
   The select screen for installation appears.
3. Click [Handbook (PDF)].
   The installation screen for "Network Sharing Camera Handbook" (PDF) appears.
4. Select the desired language and the model name of your camera, then click [Handbook (PDF)].
   Installation starts. When the installation is completed, the short-cut icon of "Network Sharing Camera Handbook" appears on the desktop of your computer.
   - The model name of your camera is printed on its bottom surface.
5. Click [Exit] → [Exit], then remove the CD-ROM from the disc drive of your computer.

For Macintosh users

1. Turn on the computer.
2. Place the CD-ROM (supplied) in the disc drive of your computer.
3. Open the [Handbook] folder in the CD-ROM, double-click the [GB] folder and then drag-and-drop the "Handbook.pdf" on the computer.

Double-click "Handbook.pdf" to view the handbook.

What you can do with a Windows computer

Take either of the following ways to connect the camera with a Windows computer and enjoy the functions.

When using various functions

By using the software "Picture Motion Browser" in the supplied CD-ROM, you can enjoy the following operations.

- Importing images taken with your camera to a computer
- Viewing imported images on a computer
- Creating a disc with edited images
- Changing the language displayed in "PMB Portable"

When using simply outside your home, etc.

By using the software "PMB Portable" embedded within the camera, you can load images onto computers or upload images on the Web. It is also useful when connecting the camera to a computer that is not installed with "Picture Motion Browser".

- By pressing (Sharemark) button (page 14), you can mark movies to upload on the Web.

For details on the functions and operations of the supplied software, see "Picture Motion Browser Guide" or Help in the "PMB Portable".

"PMB Portable" is preset with URL of several websites at factory setting. Give your consent to the following on using the image upload service, etc. (hereon after referred to as service) provided by the websites (including those preset) by using "PMB Portable".

- Depending on websites, registration procedures or fees may be required on using the service.

- Follow the terms and conditions of the agreement set by the website on using the service.
- Termination or changes in service may occur depending on certain reasons of the website operator, etc. Including these situations, Sony is not held responsible for any troubles between customers and a third party or any loss to customers on using the service.
- To view the website, you will be redirected by a server run by Sony (hereon after referred to as Sony server). You may not be able to access the website because of server maintenance, etc.
- On termination of the operation of Sony server, the termination will be informed of beforehand on Sony websites, etc.
- The URL redirected to by Sony server may be recorded for improving future Sony products and services. In this case, only the URL will be recorded and other information such as personal data will not be recorded.

Using a Macintosh computer

For details on using a Macintosh computer, refer to “Using your Macintosh computer” (page 20).

Environment for using “Picture Motion Browser” and “PMB Portable”

OS: Microsoft Windows 2000 Professional SP4/Windows XP SP2*/Windows Vista*

* 64-bit editions and Starter (Edition) are not supported.

- Standard installation is required.
- Operation is not assured if the above OS has been upgraded or in a multi-boot environment.

CPU: Intel Pentium III 1 GHz or faster is necessary.

Application: DirectX 9.0c or later (This product is based on DirectX technology. It is necessary to have DirectX installed.) Windows Media Player 9 or later

Sound Card: Direct Sound compatible sound card

Memory: Windows 2000/Windows XP
512 MB or more
Windows Vista
1 GB or more

Hard disk: Disk volume required for installation: Approximately 300 MB*

Display: DirectX 7 or later-compatible video card, Minimum 1,024 × 768 dots, High Color (16 bit color)

Others: USB port (this must be provided as standard, Hi-Speed USB (USB 2.0 compatible) is recommended), DVD burner (CD-ROM drive is necessary for installation of “Picture Motion Browser”)

* For “PMB Portable”, the disk volume required on using the program temporarily is approximately 1 GB.

Note

- Operations are not guaranteed, even on computers fulfilling the above system requirements. For example, other open or background applications currently running may limit product performance.

Installing “Picture Motion Browser”

You need to install “Picture Motion Browser” to your Windows computer **before connecting your camera to the computer.** The installation is required only for the first time.
Contents to be installed and procedures may differ depending on your OS.

1 Confirm that your camera is not connected to the computer.

2 Turn on the computer.

Notes

- Log on as an Administrator for installation.
- Close all applications running on the computer before installing the software.

3 Place the supplied CD-ROM in the disc drive of your computer.
The installation screen appears.

- If it does not appear, double-click (My Computer) → (SONYPICTUTIL).
- Under Windows Vista, the AutoPlay screen may appear. Select “Run Install.exe.” and follow the instructions that appear on the screen to proceed with the installation.

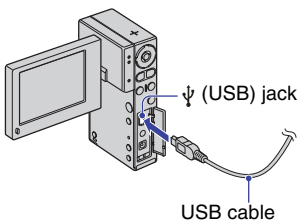
4 Click [Install].

5 Select the language for the application to be installed, then click [Next].

6 Check your area and country/region, then click [Next].

7 Read [License Agreement], select [I accept the terms of the license agreement] if you agree, then click [Next].

8 Connect your camera to the computer following the steps below.
① Connect the AC Adaptor to the camera and a wall outlet (wall socket).
② Open the LCD panel to turn the power on.
③ Connect the ψ (USB) jack of the camera to the computer using the supplied USB cable.



9 When [Connecting...] appears on the screen of the camera, click [Next] on the connection confirmation screen of the computer.

Notes

- Even if a screen prompting you to restart your computer appears, you do not need to restart it at this time. Restart your computer after completing the installation.
- It may take some time for the authentication.

10 Follow the on-screen instructions to install the software.
One of the following installation screens appears, depending on the computer environment. Check the screen and follow the instructions displayed to install the required software.

– Windows Media Format 9 Series Runtime (Windows 2000 only)
Software required to handle movies
– Microsoft DirectX 9.0c*
Software required to handle movies
* Windows 2000, Windows XP only

11 Restart the computer if required to complete the installation.

12 Remove the CD-ROM from the disc drive of your computer.

Operating the “Picture Motion Browser”

After you install the software, shortcut icons for “Picture Motion Browser” and “Picture Motion Browser Guide” are created on the desktop.
For the basic operation of “Picture Motion Browser”, see “Picture Motion Browser Guide”.

Double-click to start “Picture Motion Browser”.

Double-click to start “Picture Motion Browser Guide”.

Operating the “PMB Portable”

The steps to take when operating a computer that is not installed with “Picture Motion Browser” are explained here.

① Connect the computer with the camera (page 18).
② Select [PMBPORTABLE] in the AutoRun screen.
The “PMB Portable” will start up.

- If the AutoRun screen does not appear, double-click [PMB_Portable.exe]. [PMB_Portable.exe] is within the camera which will be recognized by the computer as an external drive when connected.
- For a computer with “Picture Motion Browser” installed, the screen to select whether to upload the image on the Web or load the image to computer using “Picture Motion Browser” will appear.
- For details on how to operate “PMB Portable”, see the Help within “PMB Portable”.
- The License Agreement screen will appear when you start up “PMB Portable” for the first time. Read the agreement carefully. If you accept the terms of the agreement, go on to the next screen.
- To display the License Agreement screen of “PMB Portable”, double-click [APP] folder in the external drive (PMBPORTABLE), double-click [EULA], and then select the language of your choice.

Recommended USB cable connection

To assure the proper functioning of your camera, connect your camera to a computer as below.

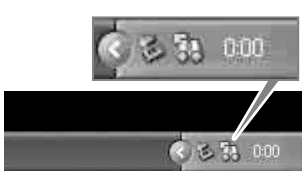
- Connect the ψ (USB) jack of the camera and a computer using the USB cable. Do not connect anything to other USB ports of a computer.
- When connecting to a computer with a USB keyboard and USB mouse connected as standard equipment, connect the camera to another USB port using the USB cable.

Notes

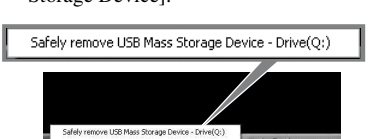
- Operations are not guaranteed when multiple USB devices are connected to a computer.
- Be sure to connect the USB cable to a USB port. If the USB cable is connected to a computer via a USB keyboard or USB hub, operations are not guaranteed.

To disconnect the USB cable

1 Click the [Unplug or eject hardware] icon on the task tray on the bottom right of the desk top.



2 Click [Safely remove USB Mass Storage Device].



3 Click [OK] (Windows 2000 only).

Disconnect the USB cable from the camera and the computer.

Notes

- Before turning off your camera, disconnect the USB cable following the proper procedures described above.
- Disconnect the USB cable using the proper procedures described above. Otherwise, files stored on the “Memory Stick PRO Duo” may not be updated correctly. Also, disconnecting the USB cable improperly may cause a malfunction of the “Memory Stick PRO Duo”.

Using your Macintosh computer

You can copy images to your Macintosh computer.

- “Picture Motion Browser” is not compatible with Macintosh computers.

Recommended computer environment

The following environment is recommended for a computer connected to the camera.

OS (pre-installed): Mac OS 9.1/9.2/ Mac OS X(v10.1 to v10.4)

USB jack: Provided as standard

CPU: iMac, eMac, iBook, PowerBook, Power Mac G3/G4/G5 series, Mac mini

Memory: 64 MB or more (128 MB or more is recommended)

Note

- Operations are not guaranteed for all the recommended computer environments mentioned above.
- If you connect two or more USB devices to a single computer at the same time, some devices, including your camera, may not operate depending on the types of USB devices you are using.
- Operations are not guaranteed when using a USB hub.
- Connecting your camera using a USB interface that is compatible with Hi-Speed USB (USB 2.0 compliant) allows advanced transfer (high speed transfer) as this camera is compatible with Hi-Speed USB (USB 2.0 compliant).
- There are three modes for a USB connection when connecting a computer, [PictBridge], [Web Camera] and [Mass Storage] (default setting) modes. This section describes the [Mass Storage] as an example. For details on [PictBridge], see “Network Sharing Camera Handbook”.
- When your computer resumes from the suspend or sleep mode, communication between your camera and your computer may not recover at the same time.

Copying and viewing images on a computer

1 Prepare the camera and a Macintosh computer, then connect the supplied USB cable.

- Perform the same procedure as described in step 8 in "Installing "Picture Motion Browser"" (page 18).

2 Copy image files to the Macintosh computer.

① Double-click the newly recognized icon → [DCIM] (still images) or [MP_ROOT] (movies) → the folder where the images you want to copy are stored.

② Drag and drop the image files to the hard disk icon.
The image files are copied to the hard disk.

- For details on the storage location of the images and file names, see "Network Sharing Camera Handbook".

3 View images on the computer.

- Double-click the hard disk icon → the desired image file in the folder containing the copied files to open that image file.

To delete the USB connection

Perform the procedures listed below beforehand when:

- Disconnecting the USB cable
- Removing a "Memory Stick Duo"
- Inserting a "Memory Stick Duo" into the camera after copying images from the internal memory
- Turning off the camera

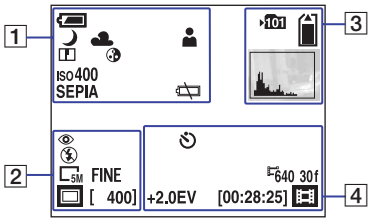
Drag and drop the drive icon or the icon of the "Memory Stick Duo" to the "Trash" icon.

The camera is disconnected from the computer.

Indicators on the screen

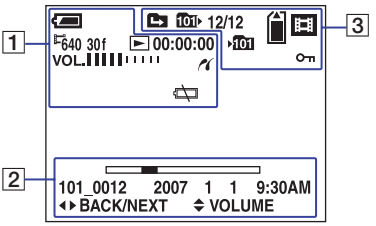
Each time you press [ ] (Screen display switch) button, the display changes (page 11).

In shooting standby

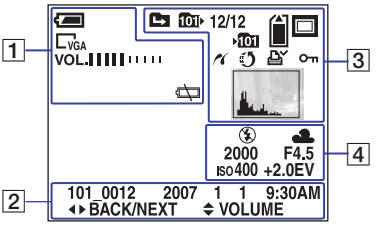


When recording movies

When playing back movies



When playing back still images



[1]

Display	Indication
	Battery remaining
W T ×1.3	Zoom scaling
	Camera mode (Scene Selection)
P	Camera mode (Program)
WB	White balance
	Close-up mode
	Sharpness
	Saturation
ISO400	ISO number
B&W SEPIA VIVID	Color mode
	Low battery warning
640 30f 320 30f 320 15f 5M 3:2 3M 2M VGA QVGA	Image size
/ /	Playback/Stop/Slide Show fast forward Fast forward/ Rewind
00:00:00	Counter
VOL.	Volume
	PictBridge connecting
	PictBridge connecting • Do not disconnect the USB cable while the icon is displayed.

2

Display	Indication
	Red-eye reduction
SL	Flash mode
	Flash charging
5M 3:2 3M 2M VGA QVGA	Image size
FINE STD	Image quality
BRK	Still image shooting mode
[400]	Remaining number of recordable images
	Menu/Guide menu • Pressing MENU switches the menu/guide menu on/off.
	Playback bar
101_0012	Folder-file number
2007 1 1 9:30 AM	Recorded date/time of the playback image
◄► BACK/NEXT	Select images
VOLUME	Adjust volume

3

Display	Indication
101	Recording folder • This does not appear when using internal memory.
	Recording/Playback Media
	Histogram • ⊗ appears when histogram display is disabled.
	Change folder • This does not appear when using internal memory.
101	Playback folder • This does not appear when using internal memory.
12/12	Image number/Number of images recorded in selected folder

Display	Indication
	Recording mode
	Sharemark
	Print order (DPOF) mark
	Protect

4

Display	Indication
	Self-timer
640 30f 320 30f 320 15f	Image size
+2.0EV	Exposure Value
[00:28:25]	Remaining recordable time
	Movie recording mode
	Flash
WB AWB	White balance
2000	Shutter speed
F3.5	Aperture value
ISO400	ISO number

5

Display	Indication
+2.0EV	Exposure Value
	Movie recording
00:00:05	Recording time

Battery life and memory capacity

Battery life and the available recording and playback time

The tables show the approximate time (min.) that the images can be recorded/ played back with the built-in battery at full capacity and at an ambient temperature of 25°C (77°F).
Note that the available recording and playback time may be less than those indicated in the table depending on the conditions of use.

- Battery capacity decreases as you use it more, as the time passes.
- The available recording and playback time and the battery life are decreased under the following conditions:
  - The surrounding temperature is low.
  - The flash is used frequently.
  - The camera has been turned on and off many times.
  - The zoom is used frequently.
  - The brightness of LCD Backlight is set to up.
  - The battery power is low.

Approximate recording/playback time (min.)

Recording time*	
Continuous recording time	90
Typical recording time**	45
Playback time	180

* Shooting movies continuously with an image size of [640(30fps)]

** Typical recording time shows the time when you repeat recording start/stop, turning the power on/off and zooming.

To check the remaining battery time

Press POWER button to turn on and check the remaining battery on the LCD screen. The remaining amount of battery is shown as follows:

	Sufficient power remaining
	↓ ↓ ↓
	Charge the battery. (The warning indicator flashes.)

- It takes about one minute until the correct battery remaining indicator appears.
- The displayed battery remaining indicator may not be correct under certain circumstances.

Number of still images and recording time of movies

The length of time for movies and the number of still images may vary depending on the shooting conditions.

The approximate recording time of movies in the default setting

(Units: hour : minute : second)

Capacity	Movie size 320(30fps)
Internal memory	
Approx. 4 MB	0:00:35
“Memory Stick Duo” formatted with this camera	
128 MB	0:19:00
256 MB	0:34:00
512 MB	1:10:00
1 GB	2:20:00
2 GB	4:55:00
4 GB	9:40:00
8 GB	19:30:00

- The shooting mode will automatically stop in either of the following situations.
  - – When the file size of the movie being recorded exceeds 2 GB.
  - – After the maximum shooting duration time* for each file has passed.

  * NSC-GC1: 2 hours, NSC-GC3: 29 minutes

The approximate number of still images in the default setting

(Units: Images)

Capacity	Photo size 5M	
	Fine	Standard
Internal memory		
Approx. 4 MB	1	3
“Memory Stick Duo” formatted with this camera		
128 MB	50	95
256 MB	95	180
512 MB	190	360
1 GB	390	730
2 GB	790	1500
4 GB	1550	2900
8 GB	3100	7000

- The number of images listed is for when [REC Mode] is set to [Normal].
- When the number of remaining shootable images is greater than 9,999, the “>9999” indicator appears.
- When images recorded using earlier Sony models are played back on this camera, the display may differ from the actual image size.
- The image quality is [Fine] on the upper row and [Standard] on the lower row.
- All numbers measured when using a “Memory Stick Duo” made by Sony Corporation. The number of still images and the length of time for movies may vary depending on the shooting conditions and the recording mediums.
- When measuring media capacity, 1 GB equals 1 billion bytes, a portion of which is used for data management.

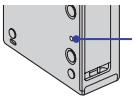
Troubleshooting

If you experience trouble with your camera, try the following solutions.

1 Check the items below, and refer to "Network Sharing Camera Handbook" (PDF).

2 Turn the power off, and turn it on again after about one minute.

3 Press the RESET button using a fine-tipped object, and turn on the power.



4 Consult your Sony dealer or local authorized Sony service facility.

When repairing the camera, we may check a minimum amount of data stored on the internal memory in order to improve the condition. However, Sony dealer will neither copy nor save your data.

Battery and power

Cannot turn on the camera.

– Remove the insulation sheet.
– The battery is discharged. Charge the battery (page 7).
– The plug of the AC Adaptor has been disconnected from the wall outlet (wall socket). Connect it to the wall outlet (wall socket) (page 7).

The power turns off suddenly.

• If you do not operate the camera for about three minutes while the power is on, the camera turns off automatically to prevent wearing down the battery. Turn on the camera again (page 9).

The battery remaining indicator is incorrect.

• This phenomenon occurs when you use the camera in an extremely hot or cold location.
• The displayed battery remaining differs from the current one. Fully discharge and then charge the battery to correct the display.
• The battery is discharged. Charge the battery (page 7).

Shooting movies/still images

Your camera cannot record images.

• Check the free capacity of the internal memory or "Memory Stick Duo" (page 25). If it is full, do one of the following:
• Delete unnecessary images (page 13).
• Change the "Memory Stick Duo".
• The shooting mode will automatically stop in either of the following situations.
  – When the file size of the movie being recorded exceeds 2 GB.
  – After the maximum shooting duration time* for each file has passed.
  * NSC-GC1: 2 hours, NSC-GC3: 29 minutes
• You are using the "Memory Stick Duo" with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position.
• You cannot record images while charging the flash.
• Press MODE and set the camera to recording mode to shoot a movie or a still image.

Vertical streaks appear when you are shooting a very bright subject.

- The smear phenomenon is occurring and white, black, red, purple, or other streaks appear on the image. This phenomenon is not a malfunction.

Viewing images

Your camera cannot playback images.

- Press MODE to change to the playback mode (page 13).
- The folder/file name has been changed on your computer.
- When an image file has been processed by a computer or when the image file was recorded using a model other than that of your camera, playback on your camera is not guaranteed.
- The camera is in USB mode. Delete the USB connection.

Computers

You cannot install “Picture Motion Browser”.

- Check the computer environment required to install “Picture Motion Browser”.
- Install “Picture Motion Browser” in an orderly manner (page 18).
- Change the USB mode of the camera to [Mass Storage].

“PMB Portable” does not start.

- Change the USB mode of the camera to [Mass Storage].

“Picture Motion Browser” does not work correctly.

- Finish “Picture Motion Browser” and restart your computer.

Your camera is not recognized by the computer.

- Disconnect devices from the USB jack of the computer other than the keyboard, mouse, and your camera.
- Disconnect the USB cable from the computer and the camera, and restart the computer, then connect the computer and your camera again in an orderly manner (page 18).
- Make sure the media check tool of the computer activates. For details on the media check tool, see “Picture Motion Browser Guide”.
- Install “Picture Motion Browser” (page 18).

Cannot use the Web Camera

- The camera and a computer are connected with USB cable before the USB driver is installed.
  Follow the steps below to uninstall the driver not recognized correctly and install the USB driver again.
  Log on to the computer with the user ID of the administrator authority.

1. Make sure the camera is connected to the computer.
2. Click [Start].
3. Right-click [My Computer] and click [Property].
   [System Property] screen will appear.
4. Click the [Hardware] tab and click [Device Manager].
5. Click [View] and click [Devices by type].
6. If the driver below, not correctly recognized, is installed, right-click it and click [Uninstall].
   - [Sony Network Sharing Camera] in [Other Devices]
7. When [Confirm Device Removal] screen appears, click [OK] and delete it.
8. Turn off the power of the camera, remove the USB cable, and re-start the computer.
9. Insert the CD-ROM into the disk drive.

10 Re-install the USB driver by taking the following steps.

① Double-click [My Computer].

② Right-click [SONYPICTUTIL(E:)](disk drive)*.

- The driver letter (such as (E:)) may differ depending on the computer you are using.

③ Click [Open], double-click [USB Driver] and then double-click [setup.exe].

Note

- The computer may not operate properly when you delete devices other than [USB Composite Device], [USB Audio Device], or [USB Device].
- Press MENU and select (Setup) → (Setup 2) → [USB Connect], and then [Web Camera] (page 15).
- The Web Camera function is not available for “Picture Motion Browser”.

Precautions

Do not use/store the camera in the following places

- In an extremely hot, cold or humid place
  In places such as in a car parked in the sun, the camera body may become deformed and this may cause a malfunction.
- Under direct sunlight or near a heater
  The camera body may become discolored or deformed, and this may cause a malfunction.
- In a location subject to rocking vibration
- Near strong magnetic place
- In sandy or dusty places
  Be careful not to let sand or dust get into the camera. This may cause the camera to malfunction, and in some cases this malfunction cannot be repaired.

On carrying

Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

On cleaning

Cleaning the LCD screen

Wipe the screen surface with an LCD cleaning kit (not supplied) to remove fingerprints, dust, etc.

Cleaning the lens

Wipe the lens with a soft cloth to remove fingerprints, dust, etc.

Cleaning the camera surface

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. Do not use the following as they may damage the finish or the casing.

- Chemical products such as thinner, benzine, alcohol, disposable cloths, insect repellent, sunscreen or insecticide, etc.
- Do not touch the camera with the above on your hand.
- Do not leave the camera in contact with rubber or vinyl for a long time.

On operating temperatures

Your camera is designed for use under the temperatures between 0°C and 40°C (32°F and 104°F). Shooting in extremely cold or hot places that exceed this range is not recommended.

On moisture condensation

If the camera is brought directly from a cold to a warm location, moisture may condense inside or outside the camera. This moisture condensation may cause a malfunction of the camera.

If moisture condensation occurs

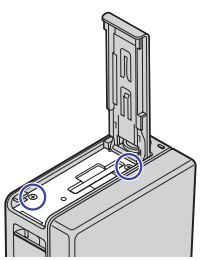
Turn off the camera and wait about an hour for the moisture to evaporate. Note that if you attempt to shoot with moisture remaining inside the lens, you will be unable to record clear images.

To remove the built-in battery

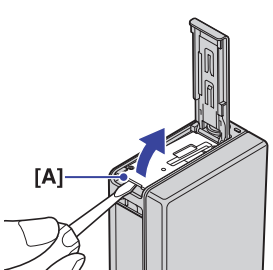
On disposal of the camera, take the following steps to remove the built-in battery

1 Make sure your camera has been disconnected from the power source.

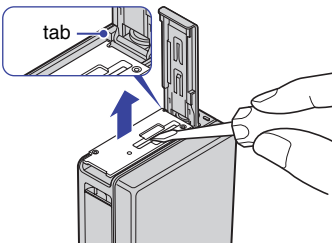
2 Open the “Memory Stick Duo” cover (page 8) and loosen off the two screws using a cross-head screwdriver.



3 Insert a flat-bladed screwdriver, etc., into the groove **[A]** and lift the cover up in the direction of the arrow until the cover does not lower back down.

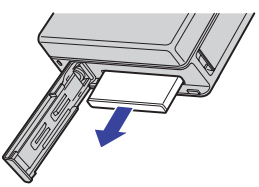


4 Insert a flat-bladed screwdriver, etc., into the “Memory Stick Duo” slot and lift the cover up in the direction of the arrow.



- Shift the cover while lifting it up to avoid the tab.

5 Take the cover off and remove the battery with the bottom surface of the camera facing down.



For Customers in Europe

Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)

This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste. By ensuring these batteries are disposed of correctly, you will help prevent potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.
In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only.
To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment.
For all other batteries, please view the section on how to remove the battery from the product safely. Hand the battery over to the applicable collection point for the recycling of waste batteries.
For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Specifications

Camera

[System]

Image device: 7.13 mm (1/2.5 type) CMOS sensor

Total pixel number of camera: Approx. 5 040 000 (2 592 × 1 944) pixels

Effective pixel number of camera: Approx. 5 040 000 (2 592 × 1 944) pixels (still images), Approx. 460 000 (768 × 598) pixels (movies)

Lens: f = 7.95 mm (48.30 mm when converted to a 35 mm still camera) F3.5 for movies
f = 6.95 mm (42.17 mm when converted to a 35 mm still camera) F3.5 for still images

Exposure control: Automatic exposure, Scene Selection (9 modes)

White balance: Automatic, Daylight, Cloudy, Fluorescent, Incandescent, Flash

File format (DCF compliant):
Still images: Exif Ver. 2.21 JPEG compliant, DPOF compatible
Movies: MPEG4 compliant (Monaural)

Recording media: Internal Memory (approx. 4 MB), “Memory Stick Duo”

Flash: Flash range (ISO sensitivity (Recommended exposure Index) set to Auto): approx. 0.3 to 2.0 m (11 7/8 inches to 6 feet 6 7/8 inches)

[Input and Output connectors]

USB jack: mini B, Hi-Speed USB (USB 2.0 compliant)
NSC-GC3: You cannot input signals to your camera through this jack

A/V OUT jack: Minijack, Video out, audio out (mono)

[LCD screen]

LCD panel: 6 cm (2.4 type) TFT drive

Total number of dots: 112 320 (480 × 234) dots

[Power, general]

Power: Lithium ion battery (built-in), 3.7 V
UPA-AC05 AC Adaptor (supplied), 5 V

Power consumption: 1.35 W

Operating temperature: 0 to 40°C (32 to 104°F)

Storage temperature: –20 to +60°C (–4 to +140°F)

Dimensions: 29 × 104 × 56 mm (1 3/16 × 4 1/8 × 2 1/4 inches) (W/H/D, excluding protrusions)

Mass: Approx. 150 g (5 oz) (including strap, etc.)

Microphone: Monaural

Speaker: Monaural

Exif Print: Compatible

PRINT Image Matching III: Compatible

PictBridge: Compatible

UPA-AC05 AC Adaptor

Power requirements: AC 100 V to 240 V, 50/60 Hz

Output voltage: DC 5 V (See the lavel on the AC Adaptor for other specifications.)

Operating temperature: 0 to 40°C (32 to 104°F)

Storage temperature: –20 to +60°C (–4 to +140°F)

Dimensions: Approx. 50 × 26 × 68 mm (2 × 1 1/16 × 2 3/4 inches) (W/H/D)

Mass: Approx. 160 g (5 oz) excluding the power cord (mains lead)

Design and specifications are subject to change without notice.

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